

COMPLETE SET OF PENDING CLAIMS

What is claimed is:

21. (Previously Presented) A program conversion apparatus that changes a source program to an object program for a target processor executing long-word instructions, comprising:

a retrieving unit, for retrieving a pair of instructions from the source program, the pair of instructions comprising a first instruction denoting a first calculation of two variables and a second instruction indicating a second calculation, different than the first calculation, of the same two variables;

a generating unit, for generating a special instruction corresponding to the retrieval pair of instructions, the special instruction comprising an operation code denoting the first calculation and the second calculation, and two operands representing the two variables; and

an arranging unit, for arranging the generated special instruction into a long-word instruction.

22. (Previously Presented) The program conversion apparatus of Claim 21, wherein the first instruction denotes addition, and the second instruction denotes subtraction.

23. (Previously Presented) The program conversion apparatus of Claim 22,
wherein:

the target processor includes a first instruction execution unit having a first calculation unit, and a second instruction execution unit having a second calculation unit and a multiplication unit; and

the arranging unit retrieves a multiply instruction that does not share dependency with the special instruction generated by the generating unit, and arranges the special instruction and the multiply instruction into one long-word instruction.